

AMENDMENTS TO CLAIMS

Please cancel claims 1-23 and add new claims 24-39. This listing of claims will replace all prior versions, and listings, of claims in the application:

1-23. (cancelled).

24. (New) A shutter assembly comprising:

a plurality of shutter blades;

an elongate translating member;

an elongate housing within which said translating member reciprocates;

a plurality of bosses, each boss operably connected to one of said plurality of shutter blades and mounted in or on said housing, whereby reciprocal travel of said translating member is operable to rotate said boss and this in turn is operable to cause rotation of the corresponding shutter blade, each said support for mounting one of said plurality of bosses; and

a plurality of shutter blade end caps, each end cap for supporting an end of one of said plurality of shutter blades, wherein at least one of said plurality of shutter blades is supported by at least one of said plurality of shutter blade end caps in respect of which a corresponding one of said plurality of bosses is integrally formed with the end cap.

25. (New) The shutter assembly of claim 24, wherein each one of said bosses is integrally formed with a corresponding one of said end caps.

26. (New) The shutter assembly of claim 24, wherein said end cap integrally formed with said boss includes a sleeve to cover one end of the corresponding shutter blade.

27. (New) The shutter assembly of claim 25, wherein said sleeve is a short sleeve extending part way over the surface of one end of the corresponding shutter blade in a tight interference fit.

28. (New) The shutter assembly of claim 25, wherein said end cap sleeve includes a gap to permit the corresponding shutter blade to be slid into or out of engagement with the end cap.

29. (New) The shutter assembly of claim 24, wherein said housing includes a pair of spaced, opposed and substantially parallel translating members in the form of toothed racks located on either side of an engaging said boss being in the form of a toothed gear.

30. (New) The shutter assembly of claim 24, wherein said integrally formed end cap includes:

an end plate shaped substantially to correspond to the end profile of said corresponding shutter blade;

a sleeve extending from said end plate and shaped to engage said shutter blade by interference fit; and

said boss extending centrally from said end plate in a direction opposite to that of said sleeve and having gear teeth for engaging said translating member.

31. (New) A method of assembling a shutter assembly including the steps of:

providing an elongate housing having two separate elongate components;

inserting a pair of racks into said housing for linear reciprocal, spaced, opposed, travel therein;

supporting a shutter blade in an end cap having a sleeve capable of receiving an end of said shutter blade, said end cap further including a toothed boss integrally formed with said sleeve of said end cap;

meshing said racks with said toothed boss;

joining said two separate elongate components to assemble said elongate housing ensuring the encapsulation of the rack and boss within said housing so that said racks reciprocate in opposite directions on rotation of said boss.

32. (New) The method of claim 31, wherein said sleeve includes a gap and said method includes the further step of:

sliding said end of said shutter blade through said gap and into said sleeve from a direction transverse to the rotational axis of said boss.

33. (New) A boss and end cap assembly operative to support a shutter blade of the shutter assembly and be supported in an elongate housing, the boss and end cap assembly comprising:

an elongate translation member that is configured to reciprocate within said housing and to cooperate with said boss to translate the reciprocal motion of said translating member into rotational motion of said boss to rotate said shutter blade, wherein said boss and end cap assembly is integrally formed and there is minimal play between said translating member and said shutter blade.

34. (New) The boss and end cap assembly of claim 33, wherein said translating member is a linearly reciprocating rack.

35. (New) The boss and end cap assembly of claim 33, wherein said boss is a pinion gear having a complete circle of teeth.

36. (New) The boss and end cap assembly of claim 33, wherein the cross sectional shape of said shutter blade is substantially fusiform.

37. (New) The boss and end cap assembly of claim 33, wherein said end cap includes a sleeve for receiving the end portion of said shutter blade.

38. (New) The boss and end cap assembly of claim 37, wherein the sleeve includes a gap to permit said shutter blade to be removed from or inserted into said assembly without disassembling the remaining components of said assembly.

39. (New) The boss and end cap assembly of claim 33, wherein said shutter assembly includes a plurality of shutter blades and each of the plurality of said shutter blades are positioned to overlap along long edges of said adjacent one of the plurality of shutter blades when said shutter assembly is in a closed position.